

MYSELF



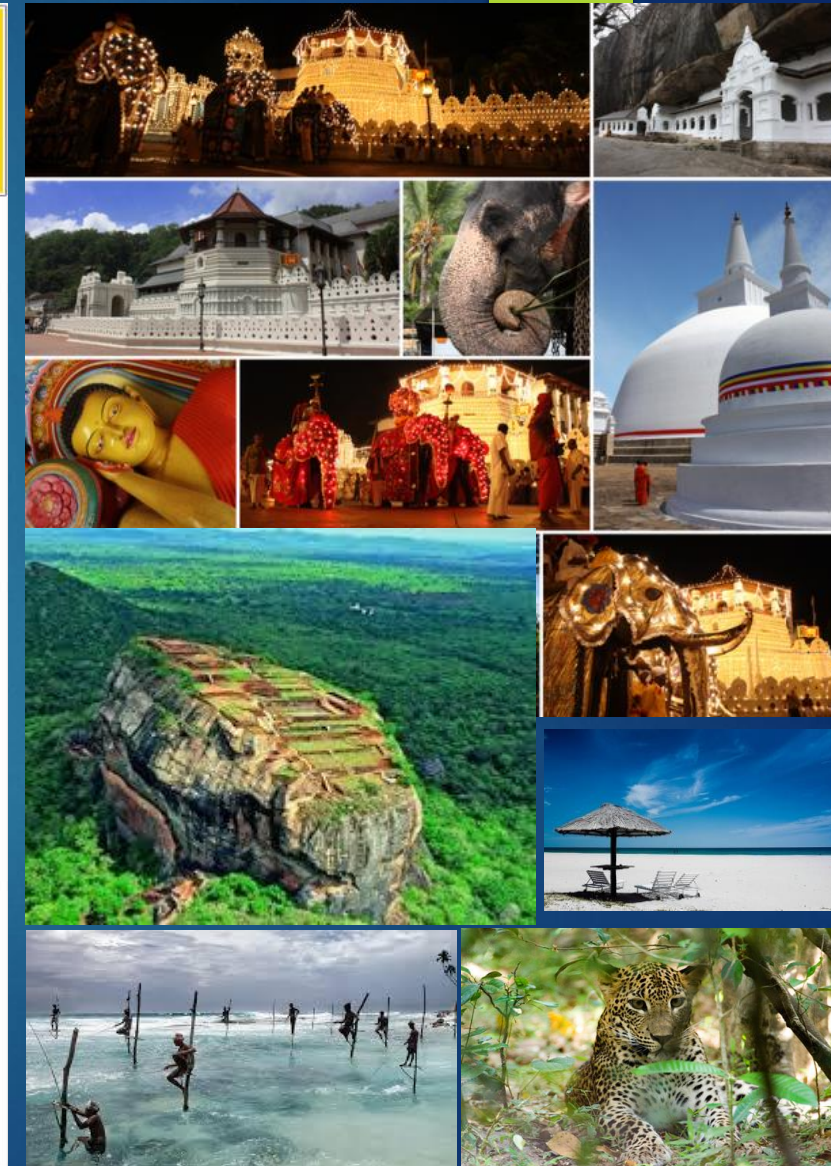
Climbing Fuji
Mountain

Spin Fest 2013

GONADUWAGE DARSHANA NADEESHAN PERERA

NEW MEXICO STATE UNIVERSITY

Sri Lanka



Personal Info

Family

Father

Mother

Sister

Wife



Hobbies

Play Badminton

Play Cricket

Watch Cricket

Watch Movies

Travelling

Shopping in Amazon



Education

Master of Science in Physics

New Mexico State University

Bachelor of Science in Physics

University of Colombo, Sri Lanka

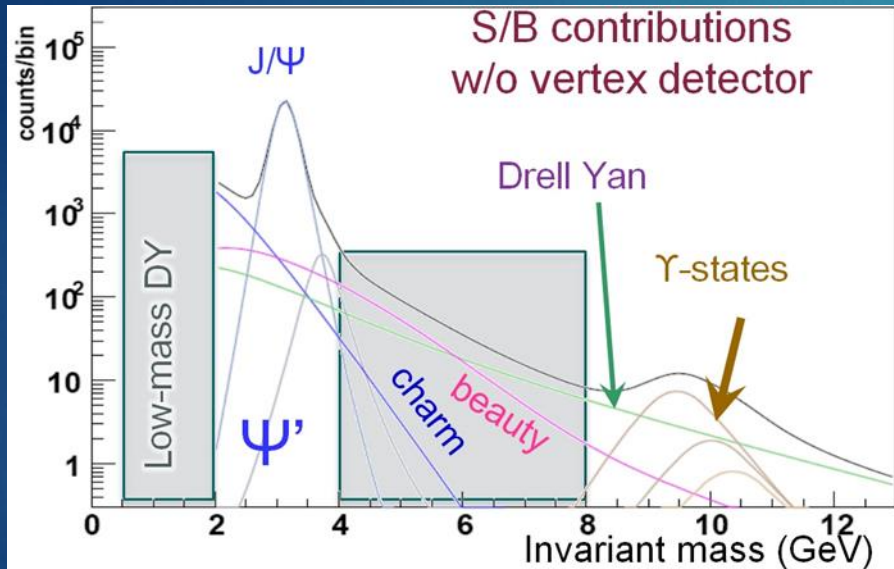
Bachelor of Science(Computer Systems and Networking) Curtin

University of Technology



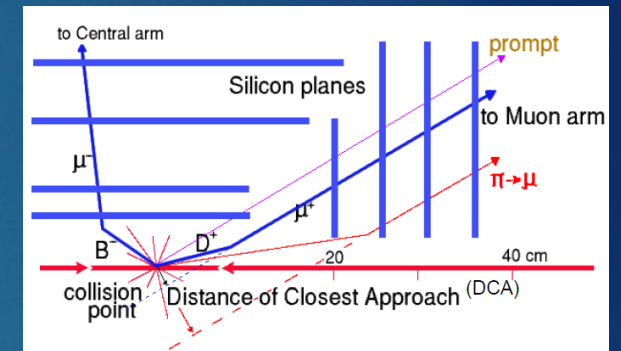
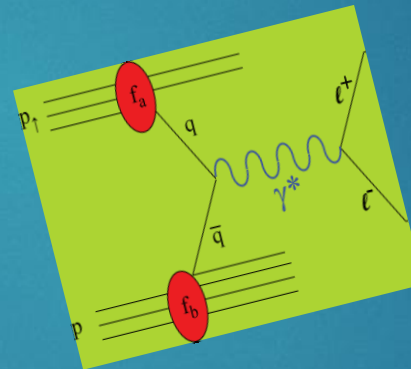
Research

Measuring Drell-Yan cross section and longitudinal double-spin asymmetry at PHENIX In p+p collisions at 510 GeV



$$A_{LL}^{DY} = - \frac{\sum_q e_q^2 \{ \Delta q(x_1) \Delta \bar{q}(x_2) + \Delta \bar{q}(x_1) \Delta q(x_2) \}}{\sum_q e_q^2 \{ q(x_1) \bar{q}(x_2) + \bar{q}(x_1) q(x_2) \}}$$

$$\approx - \frac{\Delta u(x_1)}{u(x_1)} \cdot \frac{\Delta \bar{u}(x_2)}{\bar{u}(x_2)}$$



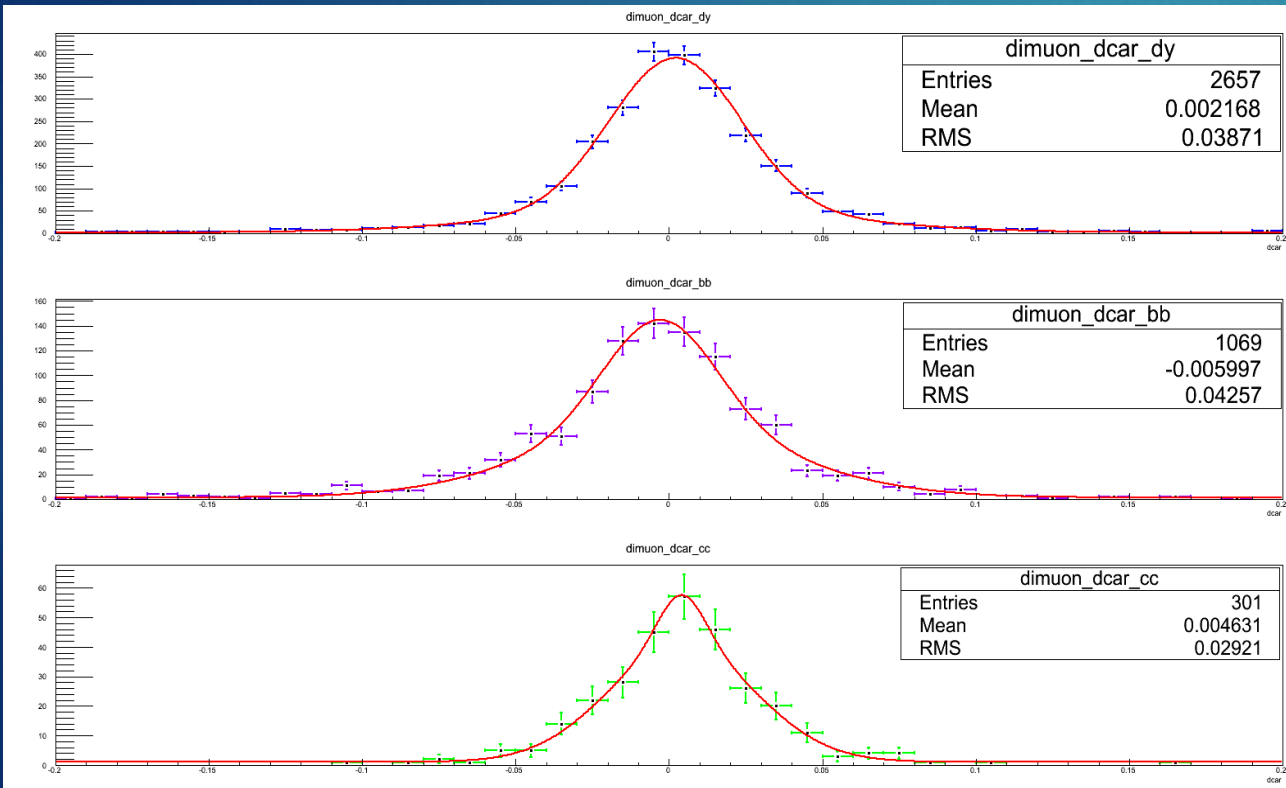
Thesis Advisor – Dr. Stephen Pate



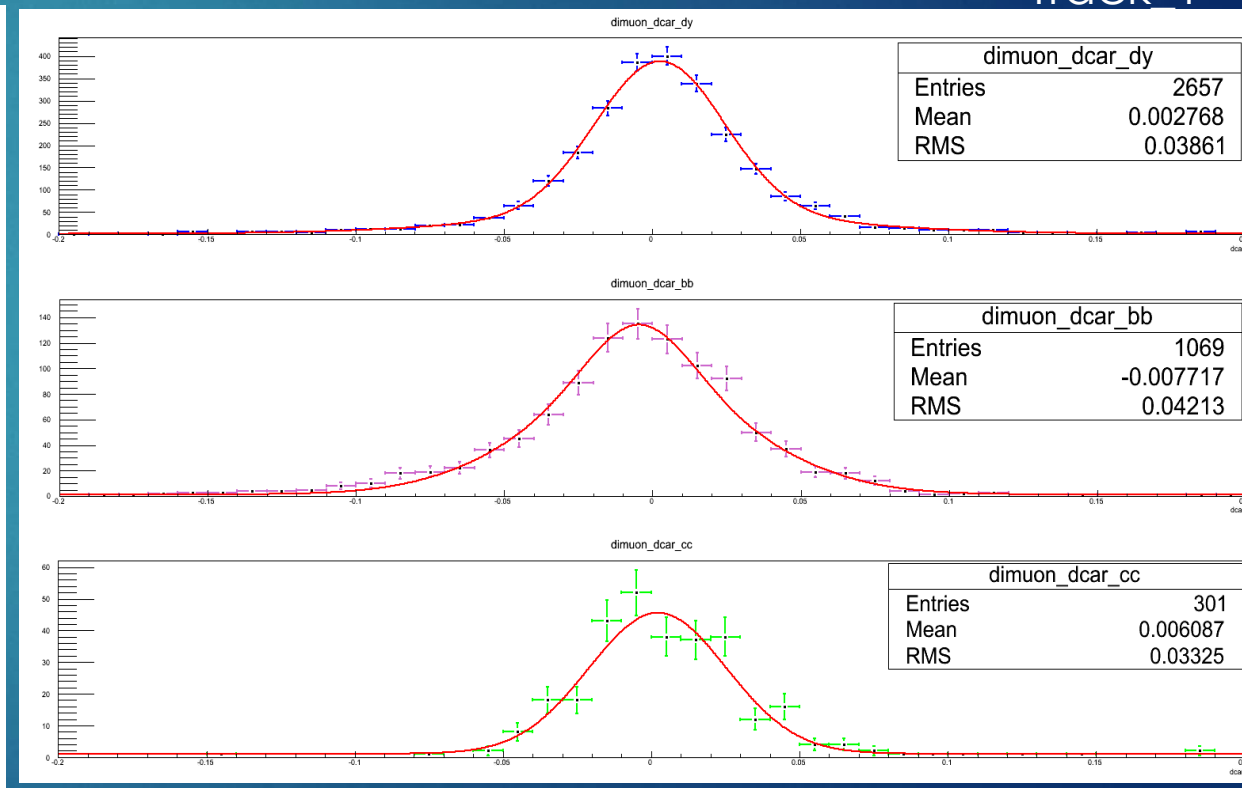
No resolution power to differentiate the heavy flavors from DY for run 13 using DCaR

Track_0

Track_1

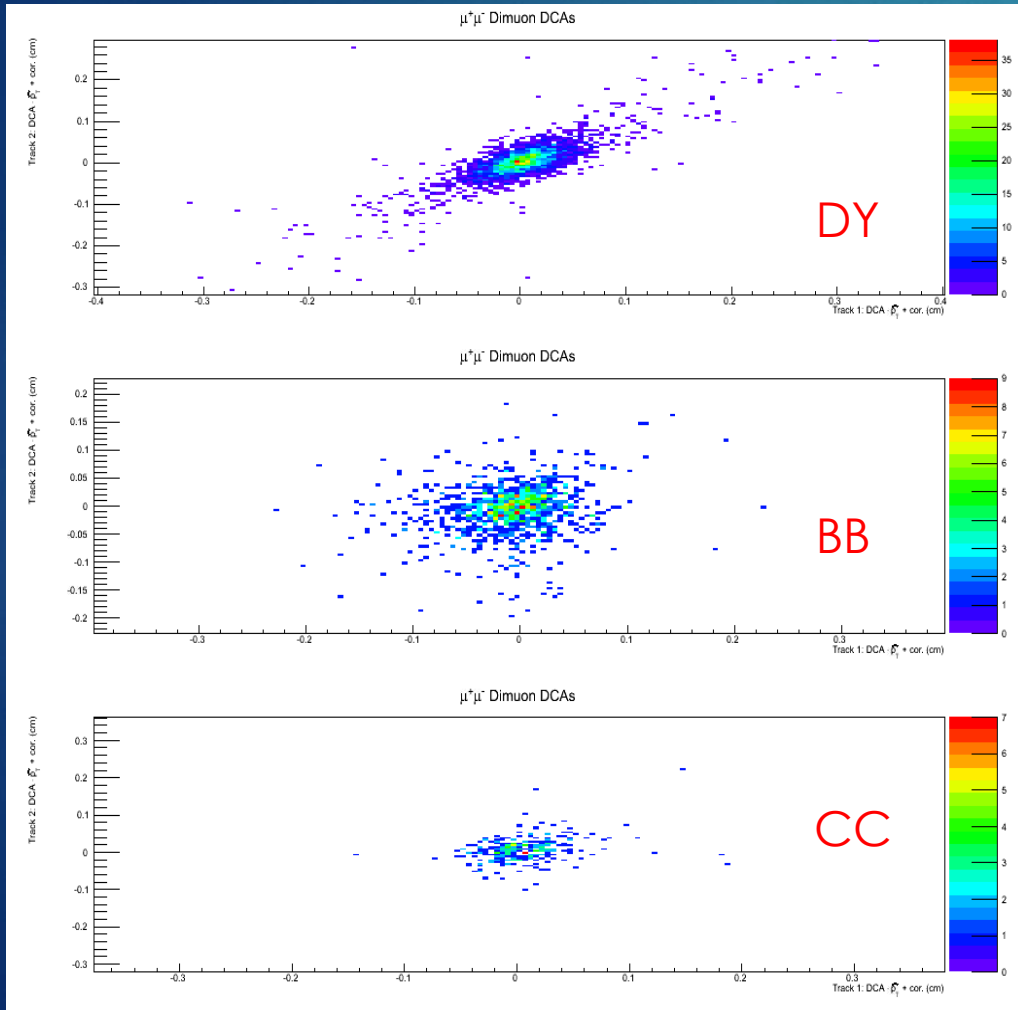


ϕ corrected DCaR



ϕ corrected DCaR

Correlation Between DY Tracks



We see a strong correlation between ϕ corrected DCAr of dimuon tracks for DY

There is no correlation between ϕ corrected DCAr of dimuon tracks for BB

And there is a weak correlation between ϕ corrected DCAr of dimuon tracks for CC

So we can look at the DCAr difference between each diuon tracks to observe different distributions for each processes.

Better resolution power using difference between DCAr of dimuon tracks

